

II. REMARKS

Claim Amendments

Claims 1, 3-14, 16-21 and 23-40 were pending in the present application. Claims 14, 16-21, and 23-40 are cancelled herein. Claims 1, 9, 12 and 13 are amended; and claim 41 is added. Accordingly, the pending claims are now claims 1, 3-13 and 41. Consideration of these claims is respectfully requested.

In this Amendment, Applicants have cancelled claims 14, 16-21, and 23-40 from further consideration in this application. Applicants are not conceding that the subject matter encompassed by claims 14, 16-21, and 23-40 prior to cancellation is not patentable over the art cited by the Examiner. Claims 14, 16-21, and 23-40 were cancelled in this Amendment solely to facilitate expeditious prosecution of claims 1, 3-13 and 41. Applicant respectfully reserves the right to pursue claims including the subject matter encompassed by cancelled claims 14, 16-21, and 23-40, and additional claims in one or more continuing applications.

Support for New Claim 41

New claim 41 is fully supported by the specification and drawings as originally filed, as shown in the following table. It is to be understood that the following table is non-exhaustive and the features of claim 41 may be supported by other portions of the specification/drawings not cited below.

Features of Claim 41	Support in Specification/Drawings
A computer implemented method of using a semantic model to increase the efficiency of deployment of an application by maximizing parallel installation of application software components, the method comprising:	Par. [0030], lines 1-3; Fig. 6.
accessing the semantic model to obtain dependency information about the application software components;	Par. [0030], lines 1-10; Fig. 5.
using the dependency information to group the application software components into sets of software components with like dependency levels, wherein a first set of software components has no dependencies, a second set of software components has dependencies only on the first set of software components, and a third set of software components has dependencies only the first and second sets of software components;	Par. [0030], lines 9-10; Par. [0031], line 5 – Par. [0032], line 14; Figs. 5-7.
installing the first set of software components in parallel;	Par. [0032], lines 5-6; Figs. 7 and 8.
responsive to completing installation of the first set of software components, installing the second set of software components in parallel; and	Par. [0032], lines 6-8; Figs. 7 and 8.
responsive to completing installation of the second set of software components, installing the third set of software components in parallel.	Par. [0032], lines 8-11; Figs. 7 and 8.

Claim Objections

The Examiner objected to claims 1, 3-14, 16-20 and 34-40 because of various informalities. Office Action pp. 2-3. Claims 14, 16-20 and 34-40 are cancelled herein and therefore these objections are now moot. Applicants have amended claims 1, 9, 12 and 13 as suggested by the Examiner. Therefore, Applicants respectfully request that the objections to claims 1, 9, 12 and 13 be withdrawn.

Claim Rejections - 35 U.S.C. § 112, First Paragraph

Claims 1, 3-14, 16-19, 21 and 23-40 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement because the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. More specifically, regarding the limitations of “a plurality of software components of a plurality of applications” and “wherein the plurality of applications includes an application server,” the Examiner states that the specification lacks disclosure on a plurality of applications and that the plurality of applications includes an application server.

Claims 14, 16-19, 21 and 23-40 are cancelled herein and therefore these rejections are now moot. Applicants have amended claim 1 to replace the limitation “plurality of applications” with “application” and to delete the limitation “wherein the plurality of applications includes an application server.” Therefore, although Applicants do not concede by this amendment that these rejections are appropriate, Applicants respectfully request that the rejections of claims 1 and 3-13 be withdrawn in light of this amendment.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

Claims 1, 3-13, 35 and 39 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. More specifically, the Examiner states that the limitation “the pre-deployment analysis” lacks sufficient antecedent basis.

Claims 35 and 39 are cancelled herein and therefore these rejections are now moot. Applicants have amended claim 1 to provide proper antecedent basis for “the pre-deployment analysis” and therefore request that these rejections of claims 1 and 3-13 be withdrawn.

Claim Rejections - 35 U.S.C. § 103, Obviousness

1. Claims 20, 34-35 and 37-40 stand rejected under 35 U.S.C. § 103 as being unpatentable over Curtis (US 6,442,754) in view of Te’eni (US 6,725,452) in further view of Cicciarelli (US 2003/0037327). Claims 20, 34-35 and 37-40 are cancelled herein and therefore these rejections are now moot.
2. Claim 36 stands rejected under 35 U.S.C. § 103 as being unpatentable over Curtis in view of Te’eni in further view of Cicciarelli in further view of Bourke-Dunphy (US 6,918,112). Claim 36 is cancelled herein and therefore this rejection is now moot.
3. Claims 1, 3-4, 6-14, 16-19, 21, 23-24 and 26-33 stand rejected under 35 U.S.C. § 103 as being unpatentable over Curtis in view of Te’eni in further view of Cicciarelli in further view of Foster (US 6,675,382). Claims 14, 16-19, 21, 23-24 and 26-33 are cancelled herein and therefore these rejections are now moot. However, because the cited combination does not teach every feature of claim 1, and at least because claims 3-4 and 6-13 depend from claim 1, Applicants respectfully traverse the rejections of claims 1, 3-4 and 6-13.

Claim 1 recites “a data structure that provides, for each of the plurality of software components, ... an indication of incompatibility with a previously installed software component.” Furthermore, claim 1 is drawn to “a pre-deployment analysis of a plurality of software components of an application prior to deployment of the application.” Applicants agree

with the Examiner that Curtis does not disclose “an indication of incompatibility with a previously installed software component.” Office Action p. 16. Applicants do not agree with the Examiner, however, that Te’eni 1:61-64 teaches this feature. Office Action p. 17.

Te’eni 1:61-64 simply teaches that dependency conflicts may arise when a computer system is upgraded. However, this is not the same as “a data structure (i.e. semantic model) that provides ... an indication of incompatibility” as required by claim 1. Applicants concede that it is well known that there can be conflicts between software components when applications are installed. Te’eni 1:61-64 simply teaches this well known fact.

The present invention prevents these types of well known conflicts from occurring in the first place. “[A] pre-deployment analysis” is performed “prior to deployment of the application.” During this analysis, a data structure is read to determine which (if any) software components to be installed will conflict with previously installed software components. Because the data structure contains “an indication of incompatibility,” the analysis allows the user to abort installation or remedy the incompatibility before deployment of the application occurs. Thus, claim 1 prevents conflicts or incompatibilities between software components from occurring. Te’eni 1:61-64, by contrast, simply teaches that conflicts can occur when a computer system is upgraded. Accordingly, Te’eni 1:61-64 fails to teach “a data structure that provides, for each of the plurality of software components, ... an indication of incompatibility with a previously installed software components.” Teaching that conflicts are known to occur is not the same as providing a data structure that provides an indication of incompatibility prior to deployment of an application.

Similarly, the Examiner alleges that, although Curtis fails to teach it, Te’eni 1:61-64 teaches “analyzing the sixth plurality of metadata to determine an eighth plurality of potential conflicts.” Office Action p. 17. However, as explained above, Te’eni 1:61-64 simply teaches that dependency conflicts may arise when a computer system is upgraded. This is not the same as analyzing metadata to determine potential conflicts. Whereas claim 1 refers to a pre-deployment analysis used to prevent conflicts from occurring, Te’eni 1:61-64 refers to the fact that conflicts can occur when a computer is upgraded.

For at least these reasons, the cited combination does not teach or suggest every feature of claim. Accordingly, because claims 3-4 and 6-13 depend from claim 1, Applicants respectfully request that the rejections of claims 1, 3-4 and 6-13 be withdrawn.

Discussion of New Claim 41

New claim 41 provides a method for increasing the efficiency of deployment of an application. A critical feature of claim 41 is that a semantic model is used to maximize parallel installation of software components whenever possible. The semantic model provides dependency information for each of the components to be installed so that they can be grouped into sets of like dependencies. By installing components of like dependencies in parallel, efficiency can be significantly improved, as demonstrated in the example in paragraph [0032] in which “rather than the deployment requiring eleven separate levels of installation, only five levels are needed, a significant reduction.” Par. [0032], lines 11-13. Applicants respectfully submit that the references previously cited by the Examiner during examination of the other claims do not disclose the features nor provide the functionality of new claim 41.

CONCLUSION

Applicants submit that the claims are now in condition for allowance.

Respectfully submitted,

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